

APPENDIX A

1. A method of substantially isolating a constituent of a sample, comprising:
dispersing the sample in a mobile phase;
applying the sample to a first end of a porous capillary column formed in a nonporous substrate,
said porous capillary column comprising a matrix including the same material as said
nonporous substrate and at least one capture substrate disposed on said matrix; and
drawing the sample across a flowfront through said porous capillary column so as to enhance
separation of the constituent from the sample by said at least one capture substrate.

2. The method of claim 1, further comprising detecting the constituent with at least
one detector disposed proximate a detecting region of said capillary column.

3 / 8. The method of claim 1, wherein said dispersing comprises dissolving the sample
in a liquid mobile phase.

4 / 12. The method of claim 1, wherein said applying comprises applying the sample to
said porous capillary column with said at least one capture substrate comprising an antibody.

5 / 13. The method of claim 1, wherein said applying comprises applying the sample to
said porous capillary column with said at least one capture substrate comprising an antigen.

6 ~~14.~~ The method of claim 1, further comprising applying a differential pressure to said capillary column to effect said drawing.

7 ~~15.~~ The method of claim 1, wherein said drawing occurs without applying differential pressure to said capillary column.

8 ~~16.~~ ⁷ The method of claim ~~15~~, wherein said drawing comprises capillary action induced by said matrix.

9 ~~17.~~ The method of claim 1, wherein said drawing comprises applying an electrical current across a length of said capillary column.

10 ~~18.~~ A method of identifying the presence of a constituent in a sample, comprising:
providing the sample in a mobile phase;
applying the sample to a first end of a capillary column formed in a nonporous substrate, said capillary column comprising a matrix including the same material as said nonporous substrate;
drawing the sample across a flowfront through said capillary column and in contact with a stationary phase disposed at a selected location along said capillary column; and
detecting binding of the constituent with said stationary phase at said selected location.

~~12~~ 19. The method of claim ~~18~~, wherein said detecting comprises applying a detection reagent to at least said selected location and analyzing said detection reagent to determine whether the constituent is present.

~~13~~ 20. The method of claim ~~19~~, wherein said analyzing comprises quantifying a change in said detection reagent.

~~14~~ 21. The method of claim ~~18~~, wherein said detecting comprises determining an electrical characteristic of said selected location and comparing said electrical characteristic to an electrical characteristic of a control.

~~15~~ 22. The method of claim ~~18~~, further comprising applying said stationary phase to said matrix.

~~16~~ 23. The method of claim ~~22~~, wherein said applying said stationary phase is effected before said applying the sample.

~~17~~ 24. The method of claim ~~18~~, wherein said applying comprises applying the sample to said capillary column with said stationary phase comprising an antibody.

~~18~~ ~~25~~ The method of claim ~~18~~, wherein said applying comprises applying the sample to said capillary column with said stationary phase comprising an antigen.

~~19~~ ~~26~~ The method of claim ~~18~~, further comprising applying a differential pressure to said capillary column to effect said drawing.

~~20~~ ~~27~~ The method of claim ~~18~~, wherein said drawing occurs without applying differential pressure to said capillary column.

~~21~~ ~~28~~ The method of claim ~~27~~, wherein said drawing comprises capillary action induced by said matrix.

~~22~~ ~~29~~ The method of claim ~~18~~, wherein said drawing comprises applying an electrical current across a length of said capillary column.

~~10~~ ~~30~~ The method of claim 1, wherein said applying comprises applying the sample to said porous capillary column with said at least one capture substrate comprising at least one of an antibody and an antigen.

~~23~~¹⁴ 31. The method of claim ~~18~~, wherein said applying the sample comprises applying the sample to said capillary column with said stationary phase comprising at least one of an antibody and an antigen.